

**ABSTRACT OF THE DISCLOSURE**

**APPARATUS AND METHOD OF MAINTAINING TWO-BYTE IP  
IDENTIFICATION FIELDS IN IP HEADERS**

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10 A method, system and apparatus for maintaining a two-  
byte identification field of IP headers when a Gigabit  
Ethernet is in use are provided. Since the identification  
field is of two bytes, there is a limited number of  
identification numbers that may be used. Due to the high  
data transfer rate of the Gigabit Ethernet, this number may  
be reached within one second. Hence, there may be a  
possibility that two or more packets may have the same  
15 identification number while in transit. In a representative  
embodiment, one identification number is used for packets  
that may not be fragmented. Thus, freeing the rest of the  
numbers for the packets that may be fragmented.  
Consequently, before the IP header is added to the packet, a  
20 check is made to determine whether the packet may be  
fragmented. If so, a unique identification number is used  
in the identification field of the IP header. If not, a  
non-unique number is used. The non-unique number is used  
for all packets that may not be fragmented.